

II. REMARKS

A. Status

Claims 1-25 are pending and stand rejected. Claims 1, 3-9, 11-18, and 20-25 are rejected under 35 U.S.C. §102(b) as being anticipated by Baxter. Claims 2, 10, and 19 are rejected under 35 U.S.C. §103(a) as being rendered obvious in view of Baxter.

Claims 12-21 are rejected under 35 U.S.C. §112 ¶ 2 as the phrase “the rotator” lacks antecedent basis.

B. Amendments to the Claims

Claim 8 has been amended to more particularly point out that a “rotator” provides rotational movement about a single axis. (See paragraphs [0034] and [0045])

Claim 12, limitation (e), was amended to correct a scrivener’s error which inadvertently included an extraneous phrase.

Claim 13 was amended to correct a scrivener’s error which inadvertently left out the extraneous phrase included in claim 12.

Claim 19 was amended for reasons other than patentability to change a grammatically correct phrasing to an equivalent grammatically correct phrasing.

Claim 20, limitation (b)(vi) was amended for reasons other than patentability to remove an improperly formatted, but otherwise blank and meaningless, line.

In all these amendments, no new matter was added.

C. Rejections Under 35 U.S.C. §112

The Patent Examiner rejected claims 12-21 under 35 U.S.C. §112 as being indefinite because in lines 19-20 of claim 12 and lines 24-25 of claim 21 the term “the rotator” lacks antecedent basis. Applicants respectfully traverse.

Claim 12 has been amended. Applicants first respectfully note that the phrase “the rotator” does not appear in claim 12. Claim 12(e) did claim “the rotator controller” which lacked antecedent basis. Claim 12(e) as amended no longer claims “the rotator controller.” No new matter has been added. Claims 13-20 depended, directly or indirectly, from claim 12.

With respect to claim 21, the Patent Examiner’s attention is respectfully drawn to limitation 21(b)(iv) which, as originally filed, provided antecedent basis for “the rotator” in claim 21(c).

D. Rejections Under 35 U.S.C. §102

The Patent Examiner rejected claims 1, 3-9, 11-18, and 20-25 under 35 U.S.C. §102(b) as being anticipated by Baxter et al., U.S. Patent No. 5,623,878 (“Baxter” or “the ‘878 Patent”). Applicants respectfully traverse.

To anticipate under 35 U.S.C. § 102, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001)

With respect to claim 1, Baxter does not disclose inflatable actuators. The Patent Examiner asserts that actuators 50, 52, and 54 in the ‘878 Patent are the same as the inflatable actuators claimed in claim 1(c) of the present application. Baxter, instead, discloses “hydraulic servo actuators comprising a left-front motion base servo actuator 50, a right-front motion base servo actuator 52 and a rear motion base servo actuator 54.” In fact, Baxter never even mentions that his actuators can be inflated.

Importantly, inflatable actuators are distinctly different from hydraulic servo actuators and would have been so at the time of filing this application to one of ordinary skill in these arts. To “inflate” means “to fill (something) with air or gas so as to make it swell.” THE AMERICAN

HERITAGE[®] DICTIONARY OF THE ENGLISH LANGUAGE, FOURTH EDITION (Copyright © 2000 by Houghton Mifflin Company). Hydraulic actuators do not make anything swell as they merely displace a piston in a cylinder. Moreover, actuators as disclosed by Baxter operate to displace the piston in a single relative plane, i.e. they provide linear motion only.

As opposed to hydraulic servo actuators, inflatable actuators swell and provide substantially omnidirectional motion.

Accordingly, inflatable actuators are not disclosed within Baxter.

Baxter does not disclose compliant stabilizers. Baxter discloses scissors 66 comprising a folding linkage in the form of two links 72 and 74 connected together at a pivot point 76. Folding links 72 and 74 are not compliant stabilizers. A “compliant stabilizer,” as would have been familiar to one of ordinary skill in these arts at the time the application was filed, means a stabilizer that can stretch and change length. Baxter has no disclosure of stretching or length changing stabilizers.

As each limitation of claim 1 is not found in Baxter, either at all or as arranged in claim 1, Baxter does not anticipate claim 1.

With respect to claim 3, claim 3 depends from claim 1 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Additionally, the Patent Examiner asserts that element 60 in the ‘878 Patent is the same as the manifold claimed in claim 3 of the present inventions. Applicants respectfully traverse.

Element 60 in the ‘878 Patent is a mounting bracket. A manifold is “a pipe or chamber having multiple apertures for making connections” THE AMERICAN HERITAGE[®] DICTIONARY OF THE ENGLISH LANGUAGE, FOURTH EDITION (Copyright © 2000 by Houghton Mifflin Company). Baxter has no disclosure of any manifold except central manifold 161. Central manifold 161 is

not disclosed as being a part of the inflatable actuator, traversed above. Accordingly, Baxter does not anticipate claim 3.

With respect to claim 4, claim 4 depends from claim 1 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. The Patent Examiner asserts that one of the actuators (50, 52, 54) is disposed proximate each corner of the substantially rectilinear deck. Applicants respectfully traverse.

Baxter teaches three actuators: two in the front and a third located at the rear. This can be reversed to where there are two rear actuators and one front actuator. Baxter further discloses a “2+2+2” and/or a “3+3” arrangement. Leaving aside for the moment that Baxter does not disclose inflatable actuators, Baxter’s disclosed actuator configurations simply do not disclose locating an actuator proximate each corner.

Accordingly, Baxter does not anticipate claim 4.

With respect to claim 5, claim 5 depends from claim 1 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Applicants respectfully traverse.

Although Baxter discloses an electrically driven hydraulic power unit which continuously recharges the accumulators from the reservoir, Baxter fails to disclose pneumatically or electrically operated valves disposed intermediate the fluid conduit and the plurality of inflatable actuators.

Accordingly, Baxter does not anticipate claim 5.

With respect to claim 6, claim 6 depends from claim 1 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Applicants respectfully traverse.

Additionally, there is simply no disclosure in Baxter of tie rods, tie rod tensioners, and/or or compliant tie rod tensioners, much less compliant tie rod tensioners adapted to provide lateral retention.

Accordingly, Baxter does not anticipate claim 6.

With respect to claim 7, claim 7 depends from claim 6 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Applicants respectfully traverse.

As well as there simply being no disclosure in Baxter of tie rods, tie rod tensioners, and/or or compliant tie rod tensioners, much less compliant tie rod tensioners adapted to provide lateral retention, Baxter does not disclose compliant tension rod is further adapted to take torque and shear loads.

Accordingly, Baxter does not anticipate claim 7.

With respect to claim 8, claim 8 depends from claim 1 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well.

The Patent Examiner asserts that Baxter's universal joints 82, which are employed to connect the body support frame 56 to the rear end of the A-arm 64 and the upper end of the scissors 66, are the same as the rotator claimed in claim 8. Applicants respectfully traverse.

As was well known in the art, U-joints are torque transmitters that, in Baxter, provide a rolling motion, not circular motion. The rotator claimed in claim 8, even before the amendment submitted herewith, is adapted to provide continuous rotation in a clockwise direction relative to a plane defined by deck 60 and/or pneumatic motion platform 10, a counterclockwise direction relative to the plane, or both (but obviously in only one direction at a time). (See paragraph [0034]) Thus, the claimed rotator may be present to provide yaw rotation of cabin 200. (See paragraph [0045]) Baxter's u-joints are distinctly different from the claimed rotator, therefore,

and cannot be used to provide the requisite rotational movement about a single axis as claimed in claim 8. Although the Patent Examiner refers to Baxter's Fig. 18, it is difficult to see how that figure supports the Patent Examiner's assertion.

Accordingly, Baxter does not anticipate claim 8.

With respect to claim 9, claim 9 depends from claim 8 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, as traversed above, Baxter does not disclose a rotator. Accordingly, Baxter does not anticipate claim 9.

With respect to claim 11, claim 11 depends from claim 8 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, as traversed above, Baxter does not disclose a rotator. Accordingly, Baxter does not anticipate claim 11.

With respect to claim 12, as traversed above, Baxter does not disclose a pneumatic motion platform, inflatable actuators, or compliant stabilizers. As Baxter fails to disclose every element and limitation of the invention claimed in claim 12, arranged as in claim 12, Baxter does not anticipate claim 12.

With respect to claim 13, claim 11 depends from claim 8 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, as traversed above, Baxter does not disclose a rotator. Accordingly, Baxter does not anticipate claim 13.

With respect to claim 14, claim 14 depends from claim 13 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Accordingly, Baxter does not anticipate claim 14.

With respect to claim 15, claim 15 depends from claim 14 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Accordingly, Baxter does not anticipate claim 15.

With respect to claim 16, claim 16 depends from claim 12 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Accordingly, Baxter does not anticipate claim 16.

With respect to claim 17, claim 17 depends from claim 13 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, Baxter does not disclose a rotator that provides continuous rotation in at least one of (i) a clockwise direction relative to a plane defined by the deck or (ii) a counterclockwise direction relative to the plane. Accordingly, Baxter does not anticipate claim 17.

With respect to claim 18, claim 18 depends from claim 17 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, Baxter does not disclose a turntable that provides yaw rotation of the cabin. Accordingly, Baxter does not anticipate claim 18.

With respect to claim 20, claim 20 depends from claim 12 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, Baxter does not disclose compliant stabilizers, especially compliant stabilizers that further comprise compliant tension rods disposed between the base and the deck where the compliant tension rods are adapted to take torque and shear loads and allow the inflatable actuators to individually impart vertical motion between cabin and frame. Accordingly, Baxter does not anticipate claim 20.

With respect to claim 21, as traversed above, Baxter does not disclose a pneumatic motion platform, inflatable actuators, and/or compliant stabilizers. Baxter further fails to disclose a station adapted to accept the amusement ride vehicle and to allow ingress and egress of human beings into and out from the amusement ride vehicle. As Baxter fails to disclose every

element and limitation of the invention claimed in claim 21, arranged as in claim 21, Baxter does not anticipate claim 21.

With respect to claim 22, as traversed above, Baxter does not disclose inflatable actuators and/or a method of providing independent, simultaneous motion of a deck mounted to a base where the motion is in three axes. As Baxter fails to disclose every element and limitation of the invention claimed in claim 22, arranged as in claim 22, Baxter does not anticipate claim 22.

With respect to claim 23, claim 23 depends from claim 22 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, Baxter does not disclose providing a controllable turntable to the deck and selectively rotating the turntable to provide yaw. Accordingly, Baxter does not anticipate claim 23.

With respect to claim 24, as traversed above, Baxter does not disclose a pneumatic motion base much less one mounted to a turntable. Baxter further fails to disclose a station adapted to accept the amusement ride vehicle and to allow ingress and egress of human beings into and out from the amusement ride vehicle or a lap bar. Baxter further fails to disclose selectively adding or removing a fluid from at least one inflatable pneumatic actuator positioned at a predetermined portion of the motion base. As Baxter fails to disclose every element and limitation of the invention claimed in claim 24, arranged as in claim 24, Baxter does not anticipate claim 24.

With respect to claim 25, claim 25 depends from claim 24 which is not anticipated by Baxter and is therefore not anticipated by Baxter as well. Moreover, Baxter does not disclose an inflatable pneumatic actuator, much less a plurality of inflatable pneumatic actuators, each positioned proximate a separate edge of the motion base. Baxter further fails to disclose use of combined and relative operation of a plurality of inflatable pneumatic actuators to produce pitch,

roll, and heave motion to the amusement ride vehicle and the turntable device provides yaw. Accordingly, Baxter does not anticipate claim 25.

E. Rejections under 35 U.S.C. §103(a)

The Patent Examiner rejected claims 2, 10, and 19 as being unpatentable under §103(a) over Baxter. The Patent Examiner notes that Baxter fails to teach the use of air-spring actuators or casters but asserts, without citation to a source, that these differences are merely mechanical expediciencies which can be used interchangeably, i.e. an air-spring for a hydraulic servo actuator and a caster for a U-joint. Applicants respectfully traverse.

Obviousness is ultimately a conclusion of law based on underlying findings of fact. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). These underlying factual findings include: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) the extent of any proffered objective indicia of non-obviousness. *Id.* at 17-18. The genius of invention is often a combination of known elements which in hindsight seems preordained. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001) Hindsight reconstruction cannot be used “to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988) As the Patent Examiner supplied no further reference over Baxter, it must be shown that a person of ordinary skill in these art seeking to practice these inventions would have chosen hydraulic actuators instead of air-springs or U-joints instead of a caster. *See, e.g., Ecolchem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361 (Fed. Cir. 2000)(broad conclusory statements are not support for obviousness).

Use of an air-spring for a hydraulic servo actuator is not a mere mechanical expediency which can be used interchangeably. Use of inflatable actuators in place of hydraulic actuators was not known in these arts at the time the application for these inventions was filed.

Moreover, with respect to the present inventions' pneumatic motion base, the air-spring actuators' primary purpose is to collectively position the cabin (e.g., provide roll, pitch, and heave) relative to the base in a gross sense. Due to the compliant nature of the air-spring actuators, air-spring actuators also provide the ability to allow the cabin to move (roll, pitch, and heave) in a substantially random, indeterminate position due to the compliancy (springiness) of the air-spring actuators.

Air-spring actuators cannot be used interchangeably for hydraulic servo actuators nor vice-a-versa. Hydraulic servo actuators, as disclosed by Baxter, are used to more precisely position a load where the positional tolerances are typically an order of magnitude smaller than those of the air-spring actuator. Moreover, the mechanical stiffness of a pressurized hydraulic actuator is greater than that of an air-spring actuator. Therefore, the secondary purpose of the pneumatic motion base would be deleted if a mere switch was made to the hydraulic servo actuator from the air-spring actuator.

Accordingly, one of ordinary skill in these arts would not use air-spring actuators interchangeably with hydraulic servo actuators.

The Patent Examiner asserts that it would be a matter of design choice to substitute a universal joint such as disclosed in Baxter with any equivalent caster such as in the claimed inventions. The present inventions use a caster to facilitate the yaw motion of the cabin, i.e. the cabin spinning about a vertical axis. Baxter discloses using a universal joint to allow the scissors linkage, which provides stability of the cabin, to move freely while the cabin pitches and rolls,

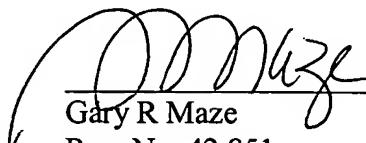
not the cabin. Thus, the cabin does not spin and the disclosed U-joints do not provide for any spinning.

CONCLUSION

In view of the foregoing, Applicants respectfully request an early Notice of Allowance of pending claims 1-25.

Respectfully submitted,

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I hereby certify that a copy of Amendment And Response To First Office Action , along with any referred to as attached or enclosed is being deposited with the United States Postal Service as First Class mail, postage prepaid in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 17, 2005.